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Title of the Invention

- Automatic Braking Systems equipped in Automobiles, Cars, Trucks, Motorcycles, Trains and All Vehicles..

Cross-Reference to Related Applications

- "Not Applicable"

Statement Regarding Federally Sponsored Research or Development

- "Not Applicable"

Reference to a Microfiche Appendix

- "Not Applicable"

Background of the Invention

- It came from my imagination in the field of invention since traffic accident often happens where it costs human lives daily even if people find unsafely crossing the streets. My imagination turns to develop step by step certain technical components related to my invention and I finally discover the structures of my invention by braking a car automatically through modern technical operation.

Brief Summary of the Invention

- Automatic braking systems are to be equipped in automobiles, cars, trucks, motorcycles, trains and all vehicles.. The advantages of the invention are to prevent killing, hurting human beings and damaging materials from traffic accidents.

- The system composes of essential parts : Infrared lenses/sensors, radars or equivalent equipments, motor, triangle wheel or hexagon/multiple-angle wheel, extension at upper part of pedal, electric wires, pin, contact for driver use, sonorous signal lamp, round wheel, iron bars, bracket arm, springs, rewind springs, adjustable switches, double spinning motor, toothed spindle, nut with frame, short tube, axis with groove part, gear, frame, outlet kit, connecting rod kit, roller & ball bearings, rubber cover

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wheel in a double pulley, moving frame, hoses, extension of braking rod, cover, nut, clip, rectangular bracket, a lock, oscillator, automatic hydraulic unit, arm, safety covering box, alarm, automatic extension antennas, installation devices to automatic steering direction, missile rolling frames..

Brief Description of the Several Views of the Drawing

- "Not Applicable"

Detailed Description of the Invention

- Infrared lenses/sensor or radar which has anti-frozen or heating system against snow is equipped in front of a car to view object or person who crosses a street accidentally at certain distance while a car is running, this sensor sends information by electric wire to switch the braking motor on immediately to brake the car by itself automatically.

- The motor runs by car electric power, its axis is equipped with a triangle wheel. Whenever the triangle wheel turns to its edge point pressing at the opposite side of upper pedal, it is the moment it brakes the car as if a driver brakes his pedal at the lower part. Brake will be released while flat part of this wheel touches the upper pedal as a driver releases his foot off the pedal. There is a ball bearing with pin fixed firmly at the surface of wheel nearby its flat part corner where a spring is fastened from pin to motor pulling the wheel at the right position after each spin so as to unlock the brake. Extension at upper part of a normal pedal is needed for a triangle wheel to brake on it at the opposite side.

- However it depends on structures of vehicles, the simple way is to equip a braking motor at upper part of a pedal at the same side, its wheel will brake directly on it without requirement of pedal extension.

Besides, we can use a round wheel to brake as well, motor axis is particularly fixed at the border between center and rim of the wheel in this way. A sensor has ability to command the motor rotating at both sides : It turns right to brake the car automatically once object is detected, it turns left to release the pedal whenever object/person disappears in front of the sensor or from left to right.

The motor holds an iron bar out close to its wheel on which is made with a bracket arm. Whenever wheel revolves to its braking summit, its bracket will be blockaded by the bar where there are two adjustable switches : The first one is to switch motor off at its right rotating summit while the second one is to switch it on at once to left rotating, it is good to use pedal movement with a double function switch instead.

We may choose a simple motor with rewind spring/springs pulling force at back spin.

The third switch places next the stop lamp switch to turn system on after the return of its braking action.

- It makes sense using screw & unscrew rotating by a double spinning motor which is installed in a frame with a nut as its outlet, since toothed spindle of the motor engages with & through this gear-nut, it turns right out braking on the pedal part and turns left in releasing. If we equip a simple motor instead at its left spin, spindle will slot into a spring before inserting to gear-nut. A sensor functions with double or simple switches which place somewhere against the pedal part.
- Similarly, we install a frame with a short tube outlet where motor axis engages in it, this axis has its groove end part connected with a gear of a double revolving motor, spin is its braking action against the pedal part. If we replace with a simple motor, an axis needs to be fastened by rewind spring to its gear or we link a spring at the end of an axis to the frame, its function includes a sensor with necessary switches.
- Another suggestion is to build an additional outlet device from original booster/master cylinder besides the brake-by-pedal one, this extra outlet possesses spring force to push its rod out before braking, this rod is linked with a connecting rod kit with roller & ball bearings fixed at the border between center and rim of a round wheel, this wheel engages a motor with adjustable distance, an infrared lenses/sensor directs its braking spin.
- Discovery shows the above complete connecting rod bearing kit & extra outlet can place on a moving frame where we fix a ball bearing in the center of wheel, this wheel will automatically connect (to brake) and disconnect (to release) to a rubber cover wheel manufactured as a part of double pulley turning by car engine to replace a motor, the frame moves with oscillator or with spring to oscillate commanded by a sensor, certain part of fluid pipe needs changing to hose for moving adaptation.
- It sounds economical if we lengthen horizontally car original braking rod to certain length and bend it down where we insert a cover with a small spring before passing it through a hole behind car frame ending with a nut and clip. At driver's side, we simply lock two springs from a hidden frame to both ends of an iron bar then we place a rectangular bracket among them to drive the bar whose outer part is against bending part of the rod, the motor drives its bracket to brake and spring force releases. There are two adjustable switches placing somewhere at both sides of the bar to turn motor off or on by spin under function of an infrared lenses/sensor. A stronger rewind spring is adapted for brake pedal if necessary and smaller spring is for braking rod.

- On the contrary, the simplest method is to use a lock with piston against the above horizontal bending part of braking rod, we use oscillator or equivalent device switching it to both sides; to brake & to release piloted by a sensor. Or automatic hydraulic unit can be used by pushing to brake and by air releasing. Whenever it pushes its piston at braking summit, a switch which places next to the top of hydraulic piston presses against the opposite arm, air will be released rapidly to push piston to its initial position where the piston will press on another switch fixed at the frame to turn itself on once again to restart until the system is off. It operates with oscillator, infrared lenses/sensor.
- Security recommendation : All braking devices must be covered safely against possible accident during automatic braking operations. Or the entire inventive braking systems can be modified and equipped at the opposite sides of pedal parts as well by pulling to brake instead of pushing actions to the same effects.
- Driver may switch off the whole system by a special contact when necessary. Sonorous signal lamp rings while Automatic Braking System is turned off, it is to make sure the system is on when a car starts.
- Automatic braking system is a new invention to be equipped in automobiles, cars, trucks, motorcycles, trains and all vehicles.. that do not possess such a system.
- Further proposal is to have small infrared lenses/sensor equipments equipped at both right & left sides of a car with ability to sound the alarm once running cars extremely approach each other.
- Automatic steering anti-attack system can safely be equipped in airplanes, military aircraft, helicopters, ships etc. Once sensor detects an attack object, aircraft will immediately steer clear of attack target to safety flying space. Sensors are to be installed around aircraft.. up & down, front & rear, right & left to shun missile attack from every possible direction. Automatic steering direction must be connected with its proper sensor correctly. Attack comes from one of these sides : front, rear, right or left, aircraft will automatically fall to down flying immediately or aircraft drops itself by turning off its engine and will restart rapidly being piloted by sensor. If attack is shot from the ground or upper side towards aircraft, automatic steering direction will turn its aircraft right or left to shun assault automatically. Sensors/radars are equipped on antennas with automatic extension to detect at longer distance to prevent earlier from missile attack.
This will safely be installed in airplanes, ships.. to avoid possible steering accident.

- If sensor/radar can precisely determine exact position of attacking missile, aircraft will automatically aim anti-missile & destroy at enemy's missile at once so it must be fixed with missile rolling frames to face at all sides to that effect. Or individual frame is required for each anti-missile direction: At up & down, front, rear, right and left sides.
- Automatic anti-missile system can be installed at fleet marine, submarine.. against air missile attack, bombing and submarine mine.. Tank may possess such a system as its anti-rocket defense.